The 20th Century Wind Ensemble

by

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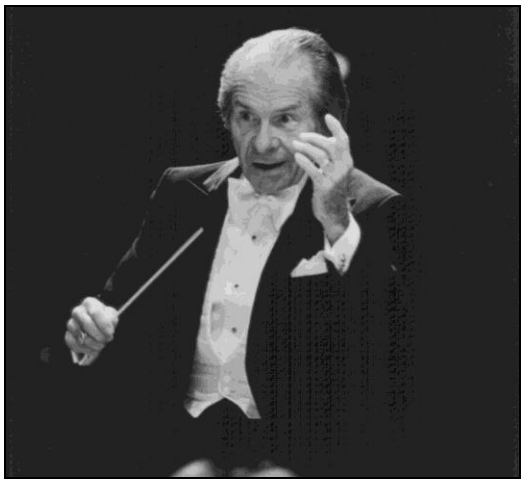

The 20th century has seen an explosion of interest, world wide, in music for winds on the part of composers, performers and listeners alike. The result has been a new richness of repertory, particularly for the concert band and the wind ensemble.

Several strands have woven together to produce this fabric. The varied and excellent compositions for band and wind ensemble that we enjoy today resulted from a series of happy collaborations and benign influences. To see how we arrived at this point, we must take a look at the history of groups that play music for reeds, brass and percussion.

The symphony orchestra, the opera and chamber orchestra, the dance band, the studio and recording orchestra, the entertainment and theatre orchestra, and the band in its multifarious delineations ... all these ensembles utilize those instruments played with an embouchure.

Man has been capturing the vibrating column of air for all of recorded history. The fulfillment of his desire to be able to manipulate this sound to his complete satisfaction, however, continues to elude him. The long period which brings the development of wind instruments from the ancient Hebrew *shofar* to the perfection and mass production of the double B-flat contrabass clarinet is almost as fascinating as a good mystery novel.

The wind instruments which existed at the beginning of the 17th century were no more standardized in their use or construction than had been the various flat and round-backed string precursors of the violin family.

Early Beginnings of the Orchestra

The ensemble we know as the orchestra came into existence at about the time that Gasparo da Salò (1542-1610) established the form of the violin which Stradivarius and others later perfected. Claudio Monteverdi (1567-1643), for instance, wrote in 1607 for

an orchestra of forty players to accompany his opera, *Orfeo*. In its instrumentation he utilized all the common keyboard instruments of the day (5 in all), 2 double-bass viols, 3 viols da gamba, 2 deep-toned lutes called chitarroni, 2 small violins a la française, 10 violas da braccia, and violins after the pattern of Gasparo da Salò, a clarino, 3 trompettes, 4 trumpets, 2 cornetts à bouquin, flutes high and low, 2 oboes, a double-harp, and 5 trombones. This assembly of instruments did not represent anything particularly new. It was, rather, a lofty expression of the ending of an era and a high point in the music of the Italian Renaissance. Twenty years later, he scored *Il Combattimento di Tancredi e Clorinda (The Duel Between Tancred and Clorinda)* (1627) for orchestral forces which differed sharply from those for *Orfeo*. The string body consisted of parts for two violins, tenor and bass viols, and the contrabasso da gamba. The basis for the modern orchestra was now established, with the violin as the leading instrument. The 1627 score, with its novel devices for the strings, along with compact scorings for flutes, trumpets and drums, cornetts and trombones, serves handsomely as a true point of departure for the development of what we call the orchestra.

In addition to his operatic activity at the court of the Duke of Mantua, Monteverdi was also for many years Maestro di Cappella at the Church of St. Mark in Venice, following in a tradition established by Adrian Willaert (1480-1562) and Giovanni Gabrieli (1557-1612). Gabrieli developed his antiphonal style of writing under the influence of the architecture of St. Mark's, which has two choir lofts, one on each side. Two works from his *Sacrae Symphoniae* (1597), in particular, illustrate the impact this architecture had on his composition, and therefore the history of music and of wind instruments. The first is the *Sonata pian e forte*, in which Gabrieli's scoring for instruments,[1] independent of any vocal line, is a great step forward in the establishment of purely instrumental ensembles; and the second, the Canzon Noni Toni a 12,[2] which surpasses the former in contrapuntal brilliance. The latter includes antiphonal effects between the various choirs, interludes for one choir, and polyphonic writing for all three choirs. These devices combine to make this profound and powerful work one of the outstanding achievements in 16th century instrumental music.

The *Sonata pian e forte* was perhaps the first great development in the instrumental style. It is significant, first of all, because it is a beautiful piece of music ... one we can fully appreciate in the 20th century. It is significant secondly because it contains the composer's instructions as to which instrument shall play which part, along with symbols regulating dynamic intensities, whose choice had heretofore been left entirely to the fancy of the players. The art of scoring had begun.

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1 The *Sonata* is scored for two choirs, the first employing 2 alto trombones, 1 tenor trombone, and 1 cornett; the second choir employs 1 viola, 2 tenor trombones, and one bass trombone.

2 The *Canzon* is scored for three choirs of four parts each in instrumentation similar to the *Sonata.*

For the next century or so, conductor/composers such as Arcangelo Corelli (1653-1713) and Domenico Scarlatti (1659-1725) were, for the most part, preoccupied with the basic techniques of string playing and string ensemble. Scarlatti established the four-voice string choir we know today.

By the time of Bach and his contemporaries, the first period of stability in the string body of the orchestra had been reached. Thereafter, techniques in construction and performance for the strings remained unchanged until François Tourte (1747-1835) introduced the bow which bears his name. Its reverse bending of the stick, from convex to concave, offered a flexibility unimaginable in the pre-Tourte bow. With its appearance a completely new school of violin playing arose, and the orchestra's string choir entered into the final phase of its development.

In his orchestra music, J. S. Bach (1685-1750) does not reveal a great affection for the wind instruments, notwithstanding his use of the oboe, trumpet and horn in the virtuoso writing of the *Brandenberg Concertos*. However, it was in the restrained but always effective underscoring of the text in his sacred works that Bach revealed great insight to the beauties of the flute, the oboe family, the horn and the trumpet.

Meanwhile, Bach's illustrious contemporary, George Frederick Handel (1685-1759), scored for a wind section consisting of flutes, oboes, bassoons, horns, and trumpets. Handel's orchestra was basically no different than Bach's in its fundamental instrumentation. On occasion, however, it differed greatly in its proportions. Handel, through the use of mass wind instrument effects to create contrasts, approached more closely than Bach the modern methods of scoring. Perhaps his most significant contribution to instrumental performance, however, is the increased demand his mass wind effects placed upon the player, forcing development beyond the technical capacities of the average performer of his time.

The year 1835, in which Tourte died, may serve as an acceptable, if arbitrary, choice for the year during which the wind band began to assume a profile which we could recognize today. Wilhelm Wieprecht (1802-1872), a Prussian bandmaster, experimented with replacing the traditional bugle's keys with Blumel's piston valve, eventually developing the tuba and creating a brass cavalry band, in which the cornets, trumpets, and horns were equipped with valves. Thereafter came the final perfection in 1847 of the plateau-keyed cylindrical-bore metal flute by Theobald Boehm, whose “system” was eventually applied to the clarinet.

Bands and Wind Ensembles Appear

In the development of wind ensembles, the reed instruments have always suffered from what may be described as the lack of patronage. The great warriors of the Crusades returned home captivated by trumpets and drums. While they were fascinated by the exotic percussion instruments of the Saracens, their great love was for trumpets, which they employed as a means of communication. They gave them household status, military dignity, and an elevated regard above all other instruments. Trumpets and horns, with kettledrums, played for the cavalry. Less "noble" instruments, such as the oboe, flute, bassoon, zinke and trombone, plus bagpipes, made whatever music was provided for the less dignified foot soldier. According to Richard Franko Goldman, "The distinction

between cavalry music and infantry music was maintained throughout the nineteenth century and well into the twentieth."[3]

The first infantry "bands" of which there is reliable record were developed for the regiments of Louis XIV. They consisted of a conglomerate mass of the common reed instruments of the late 17th century, principally oboes and bassoons, and other instruments which have long since disappeared. Music at the court of Louis XIV was in the hands of Jean Baptiste Lully (1632-1687), a creative tyrant whose marches, composed for the bands, survive as some of the earliest examples of written music for band. However, most of his efforts focused on conducting - he was one of the first conductors to gather together a virtuoso orchestra and to train and discipline the players in it by efficient methods. Lully's individual artists on wind instruments were the envy of all who heard them. The infantry band, however, was even then subject to the whim of the military which, along with the popular demands of the people, shaped the course of the wind band's development.

3 Richard Franko Goldman, "The Development of the Band: Origins and Functions," *The Concert Band* (New York, 1946) p. 23.

In Germany, municipal brass musicians, originally members of Medieval Guilds, furnished music flourishes to signify the passing of important hours of the day. By the time of J. S. Bach, these *stadtmusikers*, as they were called, provided music for solemn civic and academic occasions, festival seasons, weddings, births and funerals. Lutheran chorales, as well as secular music, were played from the church towers by choirs of cornetts and trombones. Johann Pezel (1639-1694) wrote many works for performance on the less sacred occasions, some of which have been reprinted in recent times and are performed today.

The popular aspect of the municipal musicians' work was in direct opposition to the military developments of the time. But when the military band admitted the cornett and trombone of the town band and began to include in its instrumentation those reed instruments which resemble their modern counterparts, the wind band had progressed to that stage of its development in which Wilhelm Wieprecht found it at the beginning of the 19th century. It followed the strict needs of the military, while the town band continued then, as it does today, to furnish the popular music for the people.

Christoph Willibald Gluck's (1714-1787) principal opera activity took place in Vienna and Paris. The orchestra for which Gluck scored the overture to *Iphigénia in Aulis* needs no revision for 20th century performance. While eliminating the harpsichord, Gluck introduced the piccolo, clarinet, bass drum, triangle, and cymbals into his orchestra. The score to his first opera *Orfeo*, perhaps the oldest opera still in the general repertory, brought the development of the orchestra to its highest point since Monteverdi. The Mannheim composers, such as Johann Anton Stamitz (1717-1757) and Christian Cannabich (1731-1798), were responsible for many innovations in the development of symphonic form. Mannheim performers were responsible for the perfection of performance on the clarinet, the last reed instrument to make its permanent appearance in that section of the orchestra.

The clarinet, which was to become the leading instrument of the wind band, had never developed at a pace comparable to the flute or the oboe. The clarinets in the Mannheim orchestras were not made of the fine black grenadilla wood found in today's instruments. They were made of straight-grained box wood, had a varyingly limited number of keys in addition to open finger holes -- no such system as Boehm's for the flute having yet been presented.

The clarinet's compass was wide, though its upper range was, even then, its least desirable register, one which caused it to be used in performing clarino[4] parts. Below the trumpet-like sounds of its higher register, there existed a rich octave which may be described as cantabile in character, with the comparatively dull notes (still present) above the rich chalumeau, also present in this forerunner of the modern instrument. The less brilliant, less deeply rich notes (similar to those around the break in today's system) proved to be of great service for continuo purposes, for these were notes too high for the bassoon to produce without difficulty or for the horn to produce without disappointment.

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4 The clarino was a natural trumpet of high pitch. The extreme upper partials of its harmonic series were difficult to produce with facility and accuracy. The special technique required for the performance of music written to be played in these upper partials led to specialization on this instrument by virtuoso players. It was eventually supplanted in the orchestra by the clarinet.

With the addition of the pair of clarinets, the wind section of the classical orchestra became standardized to include flutes, oboes, clarinets, bassoons, horns and trumpets, all in pairs, and aided by the kettledrums.

The Genius of Mozart and Haydn

Wolfgang Amadeus Mozart (1756-1791) is the most important composer in the development of music for wind instruments in the two-hundred-and-thirty-three-year period between the death of Monteverdi and the first production of Wagner's *Ring of the Nibelung* at Bayreuth in 1876. Mozart's knowledge of the orchestra, independent of his genius in writing for it, is particularly striking in the way he scored for winds.

It was at Mannheim that Mozart discovered that the clarinet was richer in quality and more resourceful than any other reed instrument. He wrote to his father from Mannheim, where he was a guest of the Cannabich's: [5]

> *Ah, if only we had clarinets too! You cannot imagine the glorious effect of a symphony with flutes, oboes, and clarinets. I shall have much that is new to tell the Archbishop at my first audience and I shall make some suggestions as well. Ah, how much finer and better our orchestra might be, if only the Archbishop desired it!*

That Mozart had a personal affection for wind instruments is evident in the concertos for horn, flute, clarinet, and bassoon; the Quartet for oboe and strings and the Quintet for piano and winds.

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[5] (December 3, 1778) Emily Anderson, *The Letters of Mozart and His Family* (London, 1938). Volume II, p. 948. St Martin's Press, Incorporated, New York, and Macmillan and Company, Limited, London.

As I said in the notes to my edition of Mozart's Serenade #10 in B-flat, K. 361, "*Art probably develops from an outstanding example, one most assuredly created by a genius. Serious sit-down music for wind instruments, therefore, awaited the arrival of Serenade #10 by W. A. Mozart. But there is an unfortunate contradiction here. If almost nobody knows or cares that the examples exist, the fact is locked in limbo. That is where K. 361 rested for a very long time, and with it the potential development of other music in its image. Forty-plus minutes of a composer's music from on high probably unheard by him, and dribbling off into almost nowhere, is not the way it is supposed to be. Mozart's great example for the winds just was not there for others to emulate."* Nobody knows when he wrote it. The score finally appeared, and I now have a copy of the original score from the Library of Congress, but for years, nobody saw it, so nobody played it. It had belonged to a prince, then a concertmaster, then a charming lady. It came into the hands of Mr. Jerome Stonborough and ultimately to the attention of The Gertrude Clarke Whittal Foundation Collection of music manuscripts in the Library of Congress, which purchased it for the Music Section. For the first time, the autograph of this great masterpiece was available to everybody.

Certainly, with few scant exceptions in the 20th century, nobody has yet found as true or as successful a solution for the obvious desire to create a wind band, through either the stabilization of its instrumentation or the composition of undeniably significant music for it.

Mozart's arrival in Vienna from Salzburg in June, 1781, to stay, coincided with the rise there of *Harmoniemusik*, an ensemble of pairs of oboes, clarinets, bassoons and horns. These were busy groups, much in demand for the needs of Viennese social life. Always on the hunt for opportunity, Mozart produced his two incomparable *Serenades* in E flat, K. 375 and C minor, K. 388, "*Harmoniemusik"* very much with us today.

Joseph Haydn, who was born twenty-four years before Mozart and lived another eighteen years after his death, supposedly confessed that he regretted approaching the end of his life just when he discovered how to write for wind instruments. Because he was employed at the court of Prince Esterhazy for thirty years, his fame spread throughout Europe, and thanks to the influence of visitors to Eisenstadt, his compositions were ordered by musical societies in Paris, London and elsewhere.

The orchestra which Prince Nicholas placed at his disposal consisted of 11 violins, 2 violas, two cellos, 2 basses, 2 oboes, 2 bassoons, and 2 horns. For his commissions, Haydn scored the wind instruments as specified by the patron, seldom exceeding the usual kettledrums, trumpets and winds in pairs. The score to Symphony No. 22 in E-flat Major ("The Philosopher") (1764), written for Eisenstadt, is one of the first, however, to call for the English horn. For this unusual work Haydn asks not for the usual one, but for a pair.

However, like his young friend Mozart, Haydn was anything but a reformer. The late 18th and early 19th centuries witnessed the French and American revolutions and the Napoleonic wars, and at the same time sustained economic and industrial revolutions as well. Foremost, perhaps, among the many changes which these political and social revolutions imposed upon the art of music were the increased importance of public gatherings and the rise of public concerts. The general public gathering fostered the development of the outdoor band, while the public concert contributed to the further

expansion of the orchestra. Mozart and Haydn provided a great deal of the music necessary to this ever-increasing demand for public and private concerts, the twelve symphonies composed by Haydn for his London concerts being notable examples. Purely orchestral music (independent of the opera) was to dominate the development of wind instruments for the next fifty years.

The three technical achievements in musical instrument construction mentioned earlier (those of Tourte, Blumel and Boehm) accelerated the development of both the orchestra and the band. Ludwig van Beethoven (1770-1827) benefited from the widespread adoption of Tourte's bow. The refinements to the flute, by Boehm, and their adaptation to the clarinet by Hyacinthe Klosé and August Buffet, Jr., however, were not widely adopted until mid-century.

Beethoven and Schubert Alter the Orchestra=s Wind Section

Beethoven contributed to the development of the orchestra during a period that encompassed the organized beginnings of the modern wind band. He enlarged the range of orchestral thinking more than any other composer from Gluck to Wagner. In the score of the *Eroica* Symphony (1805), he expanded symphonic form so extensively that the sheer amount of time required to play the first movement of the *Eroica* exceeds the duration of the average four-movement symphony written by his distinguished predecessors. To play the new, longer works, wind players were now obliged to add stamina to their increasing virtuosity. Already, in the first quarter of the 19th century, horn players had developed the system of stopping up the bell of the natural horn with the hand, thus altering the open tones of the harmonic series and thereby rendering this instrument more diatonic in performance. Beethoven assumed that this technical skill of hand-stopping would be used by orchestral horn players when he wrote the fully diatonic scale of C-flat Major concert to be executed by a horn crooked in the key of E-flat as assigned to the fourth player.

While trombones could have more easily provided the full scale with considerably more ease and less virtuosity, the hesitant employment of the trombone in the brass section, before Schubert, seems somewhat to have been controlled by social forces. The trombone has a history that many claim goes back to Roman times, possibly because of its resemblance to the buccina, the ancient instrument of the Roman legions. Its more likely counterpart, however, is the 14th century sackbut, very similar to the present-day trombone. The sackbut was played widely throughout Europe: We have already observed its use in Germany's tower ensemble; in Gabrieli's *Sacrae Symphoniae*; and in Monteverdi's first opera *Orfeo*. Gabrieli's use of trombones in connection with the sacred service at St. Mark's in Venice established their identity with the church. The combination of low social status and a high ecclesiastical regard, abetted, perhaps, by some inferior players who produced raucous results, must have combined to delay the permanent acceptance of the trombone in the orchestra.

Franz Schubert (1797-1828) understood the harmonic possibilities of the trombone choir better than any of his contemporaries. His B-minor Symphony ("*Unfinished*"), written in 1822, and scored for all other reeds and brasses in pairs, includes parts for three trombones. This familiar and imperishable score reveals more

clearly than any single orchestral work the extent to which wind instruments were developed by the end of the first quarter of the 19th century.

Schubert's skill at orchestration was not limited to his use of the trombone. He also, in the same symphony, uses the combination of crooked natural horns in D with their beautiful, if harmonically limited, sounds, together with the chromatically unlimited bassoons. The sound of these four instruments, playing together a four-voice chord in which no notes are doubled, sounds more like four horns than do four horns. But when he has other needs for these four instruments, or wishes to score *forte* in a cadence on the dominant of B minor, he employs the three trombones to produce the much needed "A and C" (not securely available on the natural horn and too weak in the bassoon) to fill out a well-balanced and powerful wind chord of the dominant seventh on F Major.[6]

Other composers could not have taken immediate advantage of Schubert's improvements in wind scoring, inasmuch as the B minor Symphony was not performed until 1865, nor published until 1867. Composers, or would-be composers, had little opportunity to see the scores of what are now considered the masterworks of the early 19th century. Musical education rarely included classes in scoring. The art of instrumentation, which had progressed to a point of stability commensurate with the steady improvements in the arts of instrument manufacture and performance, had not yet been systematically written down.

Berlioz Codifies the Art of Orchestration

[6] See bars 28 and 29, 36 and 37.

The monumental task of providing the world with its first orchestration book was one of the most significant among the many contributions that Hector Berlioz (1803-1869) made to instrumental music. (His highly personalized use of the trombones may serve as a link between Schubert's unplayed masterpiece and the orchestral acceptance of the trombones by the middle of the 19th century.) Berlioz, whose fantastic music and *Grand Treatise on Instrumentation* (1844) contributed immeasurably to the growth of the reed, brass, and percussion sections of the orchestra, and who gave to the literature of music for the band one of its first major works, believed in the ultimate need for the wedding of music and drama. This conviction, and a preoccupation with things grandiose, were both sympathetically adopted and refined by his contemporary, Richard Wagner.

Berlioz' *Grand Treatise* was revised and enlarged, sixty years after its publication, by Richard Strauss, incorporating further technical advances as portrayed in the music of Richard Wagner and in his own brilliant orchestral scores. As Berlioz originally published it, however, the Treatise is also a most informative history of the wind instruments in the year 1844, encompassing the work of Adolphe Sax, Theobald Boehm, and the men who perfected the piston and the rotary valves.

Beethoven completed his *Ninth Symphony* in 1823. Seven years later Hector Berlioz wrote his first, the *Fantastic Symphony*, Opus 14. Its first two bars may be said to announce the arrival of a new era in music, that of wind instruments. Throughout the *Fantastic Symphony*, the use of wind and percussion instruments established a technique in scoring, which, in turn, threatened to become a technique of composition. This evolution in style was based upon the increasing virtuosity of wind players, who were, in turn, responding to improvements in their instruments.[7]

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[7] A parallel expansion in the orchestral role of the strings did not occur, however. For example, precious few of the numerous *leitmotifs* of Wagner's *Ring of the Nibelung* are stated initially by the strings; rather, most are given to the winds. Richard Strauss demanded, as did Wagner, complete virtuosity from both the strings and winds, but his famous passages for wind instruments are the best-remembered features of his symphonic works. The string body as employed by Claude Debussy and Maurice Ravel supports, with luscious textures, beautiful writing for solo and ensemble winds. The strings of their orchestra, while not completely yielding the province of melody to the winds, are used increasingly as a source for special effect. Their wide range of tone colors, their harmonics, *pizzicato*, *ponticello*, etc., are still undeniably fascinating to the composer and the listener. In the realm of sustained tone of incomparable beauty, as it is produced by the strings in almost endless amounts, these composers may be said to have restored the ancient process of continuo, this time in reverse. Now it is the wind instruments which play the tunes while the strings support them and fill in the harmonies.

The unusually large orchestra for which Berlioz wrote the *Fantastic Symphony* (1830) consisted of the following instruments:

2 flutes
piccolo
2 oboes
English horn
E flat clarinet
2 clarinets in C
4 bassoons
4 horns in E flat, E, F, B flat Bass and C
2 piston cornets in G, B flat and E flat
2 trumpets in C, B flat and E flat
1 alto trombone
2 tenor trombones
2 tubas
2 pair of kettledrums
chimes in C and G
snare drum
cymbals (suspended and crashed)
bass drum
2 harps
strings

For this substantial group of at least thirty-seven wind and percussion players, Berlioz asks for a minimum string body of sixty players, distributed 15-15-10-11-9.

The overall substance of the first movement differs little from other first movements in symphonic music during the first quarter of the 19th century, save for Berlioz' masterful handling of the instruments. The harmonic content, although daring for the period, is draped over an instrumental framework not unlike that which Beethoven used for the first movement of the *Ninth Symphony*.

It is in the movements entitled *Scenes in the Country, March to the Gallows, and Dream of a Witches' Sabbath* that the true Berlioz is revealed, and where many of his great wind and percussion instrument effects are displayed. He introduces the harp in *The Ball*. The English horn is used as a solo instrument in *Scenes in the Country*. A quartet of kettledrums, playing four-note chords with crescendo rolls, can only be described as fantastic -- a stroke of genius! The *March to the Gallows* is a *tour de force* for reeds, brasses, and percussion, with the kettledrums again divided into four separate pitches.

In his colossal score for the *Requiem* (1837), Berlioz created the first work which is still performed today that requires brass bands for performance. Berlioz called them "small orchestras of brass instruments." Four such ensembles, totaling thirty-seven players on trumpets, trombones, and ophicleides, are required in the *Tuba Mirum.* To these are added sixteen kettledrums, manned by ten players, producing sixteen notes.

Improved Band Instruments for Berlioz' Grand Symphony

Berlioz also composed one of the first major works for band, his *Grand Symphony for Band, Orchestra, and Chorus, Funeral and Triumphant*. Fully to appreciate this work, we must return to the discussion of the development of the military band in general, and to the work of Wilhelm Wieprecht in particular.

In 1763, several decades after the death of Lully and Louis XIV, Frederick the Great of Prussia, who reigned from 1740 to 1786, refined the instrumentation of his bands to include 2 hautboys (oboes), 2 clarinets, 2 horns, 2 bassoons, and drums. (Except for the drums, this is the instrumentation of Mozart's *Serenades* in E-flat major and C

minor, K. 375 and K. 388.) It was required that the players on these instruments should double on string instruments as well.

According to Richard Franko Goldman, the outstanding band historian:[8]

> *The development of the band was more profoundly influenced by the French Revolution than by any event before or since. In the great surges of popular enthusiasm which marked the establishment of a new order, music was a vital outlet of expression. Bands, organized for and by the people, and grown to a size never before known, occupied an important place in the patriotic celebrations and open-air festivals. The number of these demonstrations, and the abundance of new music written for them, testify to the emotional fervor of the first years of the Republic.*

8 *The Concert Band*, p. 36.

In the midst of this feverish activity, Wieprecht perfected the brass instruments equipped with valves that were used in his experiments with the brass cavalry band. Meanwhile, reed instruments in general use in the first half of the 19th century suffered from clumsy mechanisms and most haphazard acoustics. Theobald Boehm (1793-1881), a flutist in the Royal Bavarian Orchestra, was obliged to perform on an instrument whose mechanism and intonation dissatisfied him considerably. In 1828 he set up a factory for the manufacture of a better instrument. Experimenting with intonation, he established by trial and error the correct acoustical placement of the fourteen holes required to play a chromatic scale. With the nine fingers that remained free (after the right thumb supported the tube), Boehm was five fingers short of success. The solution to this problem of numbers was his system of ring-keys, spring-rods, plateau keys and levers, enabling him to control the padded keys. This mechanism, which brought every one of the fourteen openings in the tube under the complete control of the nine fingers available, was the famous Boehm system. Boehm's conical-bore wooden flute was perfected in 1832. His cylindrical-bore metal flute with trill keys came fifteen years later. The instrument in universal use today is difficult to distinguish from the flute that left Boehm's shop in 1847. The principles of Boehm's system for the flute were transferred to the clarinet by August Buffet, Jr.

Adolphe Sax (1814-1894) was the last of the great instrument makers. Among his many contributions to the development of wind instruments, two are great indeed.

The first was his invention, the saxophone, which he developed in a family of instruments ranging from high soprano to contra bass. The saxophone, in spite of its proven success as a new wind sonority and its general acceptance in the years since its invention, is still subjected to a curious snobbery in "serious" music. (Perhaps it was snobbery similar to that which kept the trombones out of the classical orchestra.) The utter necessity for saxophones in the modern wind band will help to dispel this prejudice against them *if and when* the classical music world fully accepts the wind band. That saxophones have become the quintessence of jazz has thus far provided them with a source for unlimited technical development.

His second invention was not so much an invention as a perfection of earlier valve brass instruments. This instrument he called a saxhorn. The saxhorns were conical-bore brass instruments, ranging from high soprano to contrabass, equipped with an improved valve, which supposedly allowed for better intonation and permitted unhampered technical performance, regardless of key. The improvement over the odd assortment of middle-register brass instruments that preceded them was considerable. The present-day baritone, flugelhorn, and upright orchestral tuba, which descend from them, are in the band and orchestra because Adolphe Sax put them there.

An official government-approved instrumentation adopted for French military bands in 1854 attempted to modify the predominance of the clarinet family, reducing their numbers from seventeen to twelve. To compensate for the loss of five clarinets, a double quartet of saxophones was inserted (soprano, alto, tenor, baritone). This instrumentation did not last, however, and was shortly replaced by the clarinet band which persists to the present day.

Through the work of Blumel, Stoelzel, Boehm, Klosé, Buffet, Wieprecht, Heckel, Sax and others, the wind instruments were now removed from the realm of the

haphazard. The newly invented instruments, combined with those which reached final mechanical development, presented the composer with resources of greatly varied sonority, as well as almost unlimited technical facility and tonal interest.

The modern wind band, therefore, may be said to date from 1850. Thus we return to Berlioz' *Grand Symphony for Band, Funeral and Triumphant*. If proportions are vital in judging the value of such a work, this is certainly a major work for band. It is also inferior Berlioz. It was first performed at a great public occasion in the city of Paris on 28 July 1840. (The first performance in America using band, orchestra, and chorus, took place at the Eastman School of Music of the University of Rochester on 30 January 1948, under my direction.) It called for a band of 108 players, a string orchestra of 80 players, and a chorus of 200 voices. Although this work had little effect upon the future course of music for band, the Paris premiere did serve to convince Richard Wagner that Berlioz was indeed a great genius.

Wagner's Innovations for Winds

The only other work for band of any significance contributed by a major composer in this era was written by Richard Wagner (1813-1883), also for a ceremonial occasion, marking the final 1844 return of Carl Maria von Weber's body from its London grave to Dresden. This solemn and deeply moving *Funeral March* was based on two themes from Weber's opera *Euryanthe,* which Wagner combined and scored with admirable restraint and touching sympathy. It is played today in a modified instrumentation under the title *Trauersinfonie*.

Of course, the band was not the only musical body for which Richard Wagner composed. The second half of the 19th century was enriched by his great orchestral writing, which is celebrated, along with that of Richard Strauss, particularly for the deployment of wind instruments.

Strauss, comparing Wagner with Berlioz, said:[9]

> The superiority of Wagner, who perfected the modern orchestra, over Berlioz, who created it, is usually said to consist exclusively in the more profound meaning of his poetic and musical ideas. Yet there are three technical points which should be stressed (of course with reasonable reservations), for they are the basis for the perfection of Wagner's ideas in the modern orchestra: first, the employment of the richest polyphonic style; secondly, the accomplishment of this through the invention and introduction of the valve horn; thirdly, taking over the virtuoso technique of the solo-concerto for all instruments of the orchestra. (Beethoven already required this in his last string quartets, but not in his symphonies.)

9 Strauss= AForward,@ *Treatise,* p. 11.

The importance of Strauss' statement concerning the valve horn cannot be overestimated. While it was of a similar value to the scoring of Brahms, Wagner's orchestral harmony could never have existed without it.

Wagner's ideal of the orchestra is first realized in his fourth opera, *Lohengrin*, which was initially produced in Weimar under the direction of Franz Liszt in 1850. His poetic and musical concepts of opera, and his use of these dramatic principles in the orchestra, evolved from the work of Gluck, and might be epitomized by this statement written to Liszt in September, 1850, after the first performance of *Lohengrin*: "Every bar of dramatic music is justified only by the fact that it explains something in the action or in the character of the actor."

The instrumentation for which Wagner scored his famous *Ring of the Niebelung* operas embodies his conception of the ideal orchestra:

Bayreuth Orchestra

Reeds (16)
3 flutes (3rd doubling as 2nd piccolo)
1 piccolo
3 oboes
1 English horn (doubling as 4th oboe)
3 clarinets (one doubling as E flat clarinet)
1 bass clarinet
3 bassoons
1 contra-bassoon

Brass (17)
8 horns (4 of which double on 2 tenor tubas in B=, 2 bass tubas in F)
1 contrabass tuba
3 trumpets
1 bass trumpet (E flat)
3 tenor and bass trombones
1 contrabass trombone (doubling on bass trombone)

Strings (64)
16 first violins
16 second violins
12 violas
12 cellos
8 basses

Other Instruments
2 pair of kettledrums
1 triangle
1 pair of cymbals (also suspended)
1 snare drum
1 glockenspiel
6 harps

This beautifully balanced orchestra was Wagner's dream come true. The only standard orchestral instrument of today's ensemble not present is the celeste, which Peter Tchaikovsky introduced in *The Nutcracker* (1892). The occasional instruments used today which do not appear in Wagner's scores for the *Ring* are the alto flute, E flat alto clarinet, B flat contrabass clarinet, saxophones, basset horn and various percussion instruments.

Wagner's orchestra was possible only because of the instrumental craftsmen, perfectors and inventors who had gone before him. These men, sometimes decried and ridiculed as eccentric and unsophisticated, made possible the furthering of musical art. A similar, unwarranted snobbery exists today toward electronic instruments. This prejudice

against the new, those same labels which have been attached to inventors and their instruments, are also constantly hung on the contemporary composer and his music.

The steady perfection of wind instrument mechanisms permitted Wagner to score for them in all keys. The extension of reed and brass colors downward to the lower registers through such instruments as the English horn, bass clarinet, and the tuba, furnished him with instruments of similar tone quality.

Wagner's fourth operatic score, *Lohengrin*, called for an orchestra of triple reeds, four horns, triple brass, and strings, an instrumentation dictated by Wagner's harmonic technique, which is principally homophonic in origin, compared to the highly polyphonic style which he later used in *Die Meistersinger*. The scoring in *Die Meistersinger* is the most complex in all of Wagner's music, because he was projecting a complex contrapuntal harmonic technique quite different from that of *Tristan* and the *Rin*g. For *Die Meistersinger*, Wagner returned to the orchestra of Beethoven's Ninth Symphony, adding the harp, a third trumpet, the tuba, and the valve horn. In this score, Wagner kept faith with the polyphonic texture he had chosen and for which he obviously felt that Beethoven's orchestra was more suited than his own.

The Bayreuth orchestra presented Wagner with almost unlimited possibilities in instrumental combination. In considering his need for the downward extension of the quality of the horn tone below its compass, Wagner had special tubas constructed, now known as "Wagner tubas." They were pitched in F and B-flat. With their range they extended the horn quality an octave and a fifth below that of the horn pitched in F, to within a semitone of the lowest string of the double bass (E natural). Like the horn, they used the same deep funnel-shaped mouthpiece, being designed to be played alternately with the F horn, by the 5^{th}, 6^{th}, 7^{th} and 8^{th} horn players; their bore was small and conical, and they were equipped with four valves.

Wagner was among the first of a new species of public performer, the composer-conductor. He began his conducting career as chorus master in the opera at the Würzburg Theater. He then became musical director at the Königsberg Theater, and when that theater failed, director of music in the theater at Riga. Here he conducted ten orchestra concerts during the season of 1836, in addition to the opera repertory of the Riga company. Between the Riga post and his next conducting appointment at Dresden in 1842, Wagner spent almost three years living in Paris, where he was unsuccessful in promoting both himself and his music, though he enlarged his circle of friends to include men like Berlioz and Meyerbeer.

Returning to Germany in 1842, Wagner enjoyed his first success as a composer with *Rienzi*, performed at the Dresden Opera, where, as a result of his triumph, he was subsequently appointed principal conductor. In his seven years there, he rehearsed and conducted operas by Gluck, Mozart, Beethoven, Mendelssohn, Weber, and others, as well as the concerts given by the court orchestra. He prepared performances of the important orchestra music of the time, including the symphonies of Beethoven. His observations of the art of conducting were carefully preserved in an important little book called *On Conducting.*

These were important years in Wagner's development as a creative artist. His intimate association with the players and their instruments at Riga and Dresden gave him an objective sense of orchestral sonorities.

Richard Wagner's contribution to the development of the wind band is greater than the single work he wrote for it. It is manifested in the opinion of many people who have always felt that his music sounds better when played by a band than it does in its original orchestral setting. Transcriptions of well-known excerpts from his operatic music to the band medium exceed in number, perhaps, all other sources from which the band has borrowed its program materials. Wagner's music does sound *marvelous* when played by a fine band. That it sounds *better* is open to considerable debate.

In summary, these were Wagner's principal contributions to the use of wind instruments:

1. The reeds of the orchestra grew to sections of four instruments.
2. Other instruments, such as the oboe d'amore, the basset horn, and the saxophones lost influence in subsequent decades because he avoided them.
3. His methods of homogeneous scoring for quartets of reeds established sonorities that still prevail.
4. The brasses, in Wagner's scores, reached a high degree of development. They, like the reeds, were taken in fours for the purpose of scoring chords in homogeneous timbre.
5. The brasses as a section (17 in the *Ring*) acquired individuality, independence and full stature in the ensemble of the orchestra.
6. Each instrument, taken individually, found an important line in the texture of music, with the horns achieving a melodic status which can only be described as *prima donna*.
7. Wagner's tubas, which he used effectively in his own orchestral fabric, while not generally adopted by subsequent composers, found their way into the works of Anton Bruckner and Gustav Mahler.
8. The trumpets of his orchestra maintained the dignity which had been theirs for centuries, but their fully chromatic mechanisms transferred this nobility to any desired key without the loss of their true identity. Their timbre was extended downward through the introduction of the bass trumpet.
9. The trombones acquired the dignity which almost two hundred years of orchestral activity had denied them. Wagner's interest in their lower register hastened the adoption of the bass trombone, with its large bore, as a permanent member of the orchestra.
10. Wieprecht's tuba, in its further refinements by Sax, came into the orchestra to stay.

The famous instrumental passages of the Wagner operas have furnished teaching material for many of the wind instruments. These demanding studies, along with the virtuoso writing for all of them by Richard Strauss, have become the true etudes of all students of performance on wind instruments.

Richard Strauss Elevates the Technique of Scoring

Richard Strauss (1864-1949) wrote his first work for wind instruments, the Serenade, Opus 7, in E-flat Major, scored for two flutes, two oboes, two clarinets, two bassoons, contra-bassoon, and four horns, at age sixteen. Hearing the same serenade twenty years later (1900), he remarked that "double woodwinds are impossible against four horns."[10]

[10] Willi Schuh, APreface, Richard Strauss, *Symphony for Wind Instruments,* op. posth. (London, 1952). Quoted by permission of the publisher, Hawkes and Son, Ltd.

Here Strauss reveals his fundamental musical aesthetic. More important than expression, melody or structure, for Strauss, is orchestral virtuosity. The technique of scoring a musical expression became more important than the expression itself.

However, Strauss contributed much more than virtuosity to the use of wind instruments. His immense admiration for the work of Wagner is evident throughout his revision of Berlioz' *Treatise on Instrumentation*. Nevertheless, Strauss' music reveals a strong desire to force the registers of the wind instruments upward, whereas all of Wagner's additions to orchestral sonority were directed toward the extension of the lower registers.

Strauss, in his endeavor to extend the sound of the wind instruments ever higher, employed the clarinet in D, and the trumpet in D and E. Each instrument was used to its utter extremities. For example, in *Till Eulenspiegel*, the famous horn passage (bars 6-12) covers two octaves and a major sixth, and the passage for the clarinet in D (bars 615-18) covers a range of four and a half octaves. All of Strauss' large orchestra works are filled with similar examples of this expansion of orchestral wind sonority.

Strauss attempted to bring some new instruments into the wind section of the orchestra.[11] He had Heckel, the famous bassoon maker, build him an instrument designed to extend the compass and timbre of the oboe down an octave. This extraordinary and very useful instrument, which was used by Strauss in the scores to *An Alpine Symphony*, *Salome* and *Der Rosenkavalier*, has never found a place in the orchestra or the average wind band. The Heckel family, in improving what had previously been known as the baritone oboe, increased the size of the bore and added mechanisms then currently employed on other reed instruments.

The saxophones, which Berlioz had said were "new orchestral voices of rare and valuable qualities," were finally given a chance to be heard in the orchestra for the first time when Strauss scored important parts for them in his *Domestic Symphony*.[12]

The oboe d'amore, pitched in A, a third below the oboe, was another middle register reed instrument which Strauss attempted to restore to orchestra sonority. The oboe d'amore was an important instrument in the orchestra of Johann Sebastian Bach, where its beautiful quality of tone was frequently employed in conjunction with the voice. It fell into complete disuse until Strauss scored for it in the *Domestic Symphony*, after which he too abandoned it.

The basset horn, the original alto clarinet pitched in F, was invented in 1770 by Anton and Michael Mayrhofer. Mozart's use of this instrument has already been observed, and even though Beethoven and Mendelssohn scored for it in two of their most-played scores,[13] it never found its place in the orchestra and is replaced in the band by the controversial alto clarinet in E-flat. Strauss, however, felt that its value as an instrument warranted further consideration. He scored for a pair of basset horns in his opera, *Elektra*, and for one in the posthumous *Symphony for Wind Instruments.*

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11 The percussion instruments which Strauss used with such conviction were, for the most part, already present in his standard orchestra. However, he did introduce such effective traps as the rachet and the wind machine.

12 Although more than 50 years had elapsed between the issue of a patent on these instruments to Adolphe Sax and their use by Strauss, the composer cautiously noted that they could be left out in an emergency. Bizet had used the alto saxophone as a solo voice.

13 The *Prometheus Overture* and the *Scotch Symphony.* The basset horn parts (basset is a diminutive of the word "bass") are played on regular clarinets.

Strauss was a powerful musical force in the first years of the 20th century, but all of his influence as a composer, conductor, and writer could not bring the middle and high register reed instruments , whose adoption he so strongly championed , into the permanent instrumentation of the orchestra. Strauss' abiding concern for the full development of the reed family of the orchestra is revealed in his revision of the Berlioz *Treatise on Instrumentation.*[14]

[14] P. 189, Strauss' revision of Berlioz' *Treatise.*

> If in the near future, our ears should demand even finer differentiations of sound and a still greater wealth of tonal colors, we might re-introduce the double-bass oboe into the orchestra; thus, each individual timbre would be represented by a whole family group instead of the one or two members we have at present.

Yet his evaluation of wind instruments was conceived entirely in terms of their use in the orchestra. Strauss obviously had not thought at anytime in his life of writing music for the wind band.

This is one of the many unaccountable facts with which one is confronted in any summary of the artistic possibilities of the wind band. It is also one of the most discouraging to those who seek its musical acceptance, for it is almost inconceivable that a composer who knew the reed, brass, and percussion instruments as intimately as Strauss knew them could ignore them completely when they are grouped without strings to form the wind band. His long and varied career gave him close contact with people in every important artistic capital of the western world. His own evaluation of the commercial aspects of his music was equal to Wagner's. For this, if for no musical reason, it is all the more enigmatic that he did not take advantage of the enormous commercial market for band music which existed in the United States in the closing years of his life, particularly when he was represented there by one of the leading publishing firms associated with the band field. Despite this lack, when the music of Strauss is reviewed in the long perspective of history, his contributions to the use of wind instruments bid strongly for a significant place in any critical judgment of his work.

Debussy Creates the Sound of French Impressionism

The revolt of French art against all outward domination and particularly against all Teutonic influence, such as that represented by Strauss and Wagner, matured at about the time of the dedication of Wagner's Festival Theater in Bayreuth (1876). French music, and the history of the use of wind instruments, were both transformed by Impressionism as revealed in the music of Claude Debussy (1862-1918). He was greatly influenced by Symbolist poetry and Impressionist painting in his development of a new harmonic style, which, by comparison with the emphatic musical aesthetics of the Germans, was appropriately vague and insinuating. His choice of a harmonic technique that was to music what light and color were to Impressionist painting stemmed partly from his contact as a young man with the music of Modeste Moussorgsky (1839-1881). In Moussorgsky's unconventional language, which combined the use of modes from the music of the Russian Orthodox church with an intentional disregard of traditional rules of harmony, Debussy found a daring and irresistible approach to sound. Working with an unorthodox scale of whole tones, Debussy developed his impressionistic style, a style for which there was also the necessity of adapting the orchestra which Wagner and others had provided.

Debussy accordingly modified Wagner's orchestra to suit his needs. His first orchestral score to attract attention was the *Prelude to "The Afternoon of a Faun*," suggested by the Impressionist poem of his friend, Stéphane Mallarmé. This short *Prelude*, scored with appropriate restraint for three flutes, two oboes, English horn, two clarinets, two bassoons, four horns, harp, antique cymbals in E and B, and strings, was an immediate success. It established Debussy as an important composer. It was beautiful, brief, intensely passionate, harmonically intriguing, economical to produce, and offered relief from the ponderous apparatus music of Wagner and Strauss. Debussy completed

the score in 1894. It was first performed at a concert of the Société Nationale on 23 December of that year, Gustave Doret conducting.

Several aspects of its scoring continued the development of wind playing, with particular emphasis upon tone quality and color, expressiveness, flexibility, and individuality. The extent to which Debussy scored for the solo flute established a juxtaposition of that instrument with the accompanying orchestra which later composers have found difficult to resist. Debussy's scoring for the horns as a quartet in this score explored their tonal colors with singular effect. The extended solo and quartet passages, which he scored to be played muted, epitomized all of his later orchestral music. He also wrote a masterful part for the harp in this *Prelude*, utilizing many of its myriad tonal qualities, such as glissando and harmonics, previously unused to this extent in orchestral music.

Employing the unusual sound of the antique cymbals (crotales) of definite pitch in *The Afternoon of a Faun* was Debussy's distinctly personal contribution to the percussion colors of the orchestra. These instruments come in pairs, are cast from bell metal, and produce a clear ringing sound that no other bell can duplicate. Their use since Debussy's introduction of them, has expanded beyond his pair to today's two-and-one-half-plus chromatic octaves of them, mounted in keyboard fashion; they are everywhere because Debussy and today's composers put them there.

The instrumentation which Debussy customarily used for his orchestral music and for his opera, *Pelleas and Melisande*, was not distinguished for its size or inclusion of exotic instruments, but with it he achieved the most remarkable results from the simplest means. His delicate scoring for percussion instruments, particularly those instruments of definite pitch, such as the xylophone, glockenspiel, and chimes, explored their subtle colors and quieter timbres. Debussy's highly individual harmonic means were filtered through the orchestral forces that had been perfected by his predecessors. His music was such an essentially personal expression that the orchestral technique by which it was so perfectly projected became virtually limited to his use alone.

Debussy, like his contemporary Strauss, contributed no music to the literature for wind band. He likewise contributed nothing to the repertory of wind chamber music ensembles (although his *Premiere Rhapsodie* for Clarinet and Orchestra has been seized upon by all who wish to perform on that instrument in a solo capacity). Debussy knew of the existence of the band through his many observations of music in the city of Paris, where he was an active and uncompromising critic and musical journalist. His acrid observations of the band music of the famous American, John Philip Sousa, are devastating and unmercifully sarcastic:[15]

> *At last! . . . the King of American music is within our walls! That is to say that during a whole week Mr. J. P. Sousa and his band will reveal to us the beauties of American music and how to use it in the best society. One must really be singularly gifted to conduct this music. Thus, Mr. Sousa beats time in circles, or he shakes an imaginary salad, or sweeps up imaginary dust, and catches a butterfly out of a contrabass tuba. American music may be the only kind which can find a rhythm for unspeakable cake-walks. If so, I confess that at present this appears to be its sole claim to superiority over other music . . . and Mr. Sousa is indisputably its king.*

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15 Claude Debussy, *Monsieur Croche the Dilettante Hater*, trans. B. N. Langdon Davies (New York, 1948), P. 85. Lear Publishers, Inc. Quoted by permission of Crown Publishers, Inc.

Thus another great composer, a master at writing for wind and percussion instruments, contributed nothing to the repertory of the wind band, which by the time of Debussy's death in 1918 was essentially the same as it is today. His distinguished contemporary and countryman, Maurice Ravel (1875-1937), who many believe to be the greatest orchestrator of the 20th century, likewise contributed no music to the band.

Ravel's ballet, *Daphnis and Chloe*, was written in 1910 and first produced in Paris two years later. The orchestral virtuosity required for performance of this score promoted the use of both the alto flute and also the high soprano clarinets that Strauss had suggested. Aside from the incorporation of singing voices employed as sonority resources, a practice, begun by Debussy and Holst, and its utter beauty of sound, there was little else about Ravel's music which contributed significantly to the further development of the winds of the orchestra. The Russian Ballet, however, for which *Daphnis and Chloe* had been commissioned, assumed a commanding position in the subsequent, and, perhaps, last significant developments of the orchestra and the use of its present wind instruments.

Stravinsky, Diaghilev, and the Dawn of Modern Composition for Winds

Under the direction of its famous impresario, Serge Diaghilev (1872-1929), the Russian Ballet was one of the most brilliant theatrical and musical enterprises in the long history of theater. Its influence on music's development in the first quarter of the 20th century is revealed in the long list of composers who either composed or arranged for Diaghilev: Claude Debussy, Paul Dukas, Manuel de Falla, Maurice Ravel, Ottorino Respighi, Richard Strauss, and Igor Stravinsky.

Igor Stravinsky (1882-1971) was to receive numerous commissions from Diaghilev in the twenty years during which they were intimately associated in the world of ballet. Fresh from completing his studies with the great Russian instrumentator, Nicholas Rimsky-Korsakov (1844-1908), Stravinsky's first contact with Diaghilev was in 1909, as orchestrator of Chopin's *Nocturne* and *Valse Brilliante* (the first and last pieces of the ballet *Les Sylphides*).

Later in 1909, Diaghilev commissioned Stravinsky to write the score for a new ballet, *The Firebird*, to be produced at the Paris Opera House in the season of 1910. The orchestra for which Stravinsky scored the ballet consisted of reeds in fours, four horns, triple brass, kettledrums, enlarged percussion, celeste, three harps, strings, and a newcomer to the orchestral palette, the piano, which became popular as an orchestral instrument after Stravinsky used it in this score. His immediate success in Paris gave him contact with the leading composers then resident there, among them Debussy, Ravel, and Falla. Encouraged by his acceptance in the artistic and musical world, he discussed with Diaghilev the possibility of writing another ballet. Stravinsky, in his book, *Chronicle of My Life*, described the origin of this ballet as follows:[16]

> *One day, when I was finishing the last pages of 'L'oiseau de Feu' in St. Petersburg, I had a fleeting vision which came to me as a complete surprise, my mind at the moment being full of other things. I saw in imagination a solemn pagan rite: sage elders, seated in a circle, watched a young girl dance herself to death. They were sacrificing her to propitiate the god of Spring. Such was the theme of 'Sacre du Printemps.'*

16 Igor Stravinsky, *Chronicle of My Life*, trans. anon. (London, 1936), pp. 55-56. Victor Gollanez, Ltd.

Stravinsky went to Switzerland to compose the music. But before plunging into the arduous task of its creation, he sought a momentary diversion by composing an orchestra piece in which the piano would play an important part. This later became the ballet *Petrushka* when Diaghilev, who had come to see what Stravinsky had done on the *Rite of Spring*, seized instead upon the choreographic possibilities of Stravinsky's sketches for the orchestral piece.

Petrushka was first produced in Paris on 13 June 1911, Pierre Monteux conducting. The orchestra for which it was scored is similar to that used in *The Firebird*. Greater demands are made upon the piano and increased virtuosity is required from the trumpets, scored with pairs of cornets in the fashion of the French composers of the time, and from the tuba. In *The Firebird* and *Petrushka*, Stravinsky extended Rimsky-Korsakov's tradition of brilliant instrumentation. However, in the *Rite of Spring,* Stravinsky both crowned and concluded the steady three-hundred-year evolution of the orchestra.

The scoring of Stravinsky's *The Rite of Spring: Pictures of Pagan Russia*, calls for the following instrumentation:

Strings:	(a large body of players in the manner of Strauss or Wagner)
Reeds:	piccolo 3 flutes (the 3rd doubling as 2nd piccolo) alto flute in G 4 oboes (the 4th doubling as 2nd English horn) English horn clarinet in D 3 clarinets in A and B-flat 2 bass clarinets 3 bassoons 2 contra-bassoons
Brass:	8 horns (of which the 7th and 8th players double as 2 tenor tubas in B-flat) trumpet in D 4 trumpets in C (the 4th doubling as bass trumpet in E-flat) 3 trombones 2 tubas
Percussion	5 kettledrums (played by 2 players with the first pair scored for a high drum in G and G-flat) bass drum cymbals tam tam antique cymbals in B-flat and A-flat tambourine triangle guiro

The scandal which was created by *The Rite of Spring* has been thoroughly recorded and is today happily ignored. However, the impact of Stravinsky's music was a force from which orchestral music has not yet thoroughly recovered, if indeed it ever will.

Percussion became a fourth section of the orchestra. Its masterful use by Stravinsky contributed considerably to the establishment of the battery as an individual element in symphonic music. In a strange omission, perhaps, Stravinsky purposely left out all of the vibra-cussion instruments (harp, celeste, piano, xylophone, glockenspiel, and chimes) since his whole approach to sound in *The Rite of Spring* is one of dryness, of almost primitive rhythmic permutation to which tonal sound is of secondary importance. At the same time, the kettledrum scoring raises those instruments to the highest level of the percussion player's art.

The steady artistic erosion that had begun to wear away the traditional orchestral violin techniques of the 18th century masters had become complete.

The winds in *The Rite of Spring* also no longer serve the same functions for which Strauss laid down his principles of scoring by homogeneous timbre. While this system suited Strauss' and Wagner's harmonic idioms, Stravinsky's harmonic technique in *The Rite of Spring* was completely independent of the formula of progression, resolution and cadence on which earlier harmonic practice was founded. Stravinsky's inherent genius used rhythmic organization, on the one hand, and the deployment of the timbres of orchestral instruments, on the other, as the two principal sources for vertical combinations of sound which functioned as a harmonic technique. While the contrapuntal element is also used for the generation of harmony, when harmonic changes occur very rapidly, it is the rhythmic element that controls and organizes them for the ear. The triad, which had dominated music long before Jean Phillipe Rameau (1683-1764) propounded his theory of inversion in 1726, practically disappeared in *The Rite of Spring*.

After the creation of *The Rite of Spring*, Stravinsky turned his back on the post-Wagnerian orchestra, which he had strained to unprecedented degrees of instrumental virtuosity, aural capacity, and rhythmic complexity. Ever silent as to the reasons why, he simply abandoned the carcass of his greatest creation to the carrion crows of 20th century composition.

Stravinsky Turns to Composing for Winds

The outbreak of World War I, a little more than a year after the first performance of *The Rite of Spring*, eventually affected the fortunes of Diaghilev, whose company was plagued by the dispersion of many of its personnel. Stravinsky was in Switzerland when the war engulfed France. Later, as a result of the Communist Revolution, he became cut off from his Russian resources as well. Out of their mutual sufferings, Stravinsky and his creative friends in Switzerland organized a small traveling theatre to pool their talents in the common cause of economic survival. This venture produced *The Soldier's Tale*, a work designed to be read, played and danced, performed with seven instrumentalists, playing violin, double-bass, clarinet, bassoon, cornet, trombone, and multiple percussion instruments. This first reaction against the extremities of the orchestra which he had used in *The Rite of Spring* was followed by three other works which were conceived for wind instruments. these three important compositions, *The Symphonies of Wind Instruments* (1920), *Octet for Wind Instruments* (1923), and the *Concerto for Piano and Wind Instruments* (1924), together with his *Circus Polka* (1942) are Stravinsky's contribution to the literature of music for winds.

The *Symphonies of Wind Instruments*, written in memory of Claude Debussy and first performed by Serge Koussevitzky (1874-1961) in London on 10 June 1921, are scored for what has become the wind section of today's symphony orchestra:

3 flutes	4 horns in F
2 oboes	3 trumpets in B-flat
English horn	3 trombones
3 clarinets in B-flat	Tuba
2 bassoons	
contra-bassoon	

This is, perhaps, the most significant piece of music to be written for wind instruments in the 20th century. The principle of scoring with homogeneous timbre which Stravinsky abandoned in *The Rite of Spring* became, on the other hand, the premise upon which the *Symphonies* were conceived and scored. In Stravinsky's own words, *The Symphonies of Wind Instruments* are "an austere ritual, which is unfolded in terms of short litanies between different groups of homogeneous instruments." [17]

This work is filled with great beauty and utter musical logic. A more masterful treatment of the wind instruments in the musical language of our time is difficult to imagine. It is rhythmically complex, in the manner of *The Rite of Spring*, to which it is more akin than to any other of his scores; but there is present in its somber chorale-like harmonies a depth of emotional intensity which (though he would probably have denied it emphatically) is beauty itself.

[17] Eric Walter White, *Stravinsky: A Critical Survey* (London, 1947), p. 96. Quoted by permission of the publisher, John Lehmann.

I'll never forget the first time I saw the *Symphonies* in score. The first time I saw it, I said to myself, "That is IT! That is absolutely it." I found out later that it had been presented on the radio, but I never heard the performance. So I learned the piece from score alone. The recording by the Eastman Wind Ensemble, which I conducted, was made in March of 1957. I sent a copy *,* the first stereo copy *,* to Igor Stravinsky as a gift to him on his 75th birthday, 17 June 1957. He responded with a photograph, the famous one on the cover of his own recording of the Symphonies, inscribed as follows: "*To Frederick Fennell and the Eastman Wind Ensemble, my very best wishes for their birthday wishes and their good recording of my Symphony for Wind Instruments. Most sincerely, I. StraWinsky."*

Barry Benjamin was the first horn player of the Eastman Wind Ensemble for that performance. He's retired now, but we got together recently and reminisced about performing that piece. In the horn part, it ends with nineteen high A naturals in a row *,* no place to hide. This recording, with the Stravinsky paired with Arnold Schoenberg's *Theme and Variations, Op. 43a* and Paul Hindemith's *Symphony in B-flat for Concert Band*, really broke the mold. It wasn't marches, it wasn't British band classics, it was not merely great wind music, but great music, period! It's one of the best things I've ever done.

There are no exotic instruments in the instrumentation of the *Symphonies*. No instrumental innovations mark this as contributing materially to the development of wind instruments. But in the area of repertory it is a contribution of the greatest magnitude. The one hundred and forty years between Mozart's *Serenade No. 10 in B-flat* and the *Symphonies of Wind Instruments* reveal quite clearly, however, that composers with a true perception of the wind instruments by themselves as a sonority for performance are as rare as genius itself.

That the composition of this work was not an isolated effort or a mere concession to somebody's prodding is clearly stated by Stravinsky in *Chronicle of My Life:*[18]

[18] Stravinsky, *Chronicle*, p. 171.

My special interest in wind instruments in various combinations had been roused when I was composing Symphonies à la Mémoire de Debussy, and this interest had continued to grow during the ensuing period. Thus, after I had, in these Symphonies, used the ordinary wind orchestra (wood and brass), I added in Mavra double-basses and violoncellos, and episodically, a little trio of two violins and viola.

Having again used a wind ensemble for chamber music in the Octuor, I later undertook the composition of my Concerto, which, as regards colour, is yet another combination, that of piano with wind orchestra reinforced by double-basses and timbals.

Stravinsky played the *Concerto* himself more than forty times in the five years after its premier under Serge Koussevitzky in Paris. In the *Concerto* and the *Symphonies*, he has written two major works for large groups of wind instruments. His *Circus Polka*, commissioned by John North for the 1942 season of Ringling Brothers, Barnum and Bailey Circus, was scored for the instrumentation of the Ringling Circus Band and is published in that setting, scored by David Raksin.

He was also aware of the decline of traditional string writing and his part in its deterioration, as he confessed:[19]

The orchestral use of strings has for some time suffered a sad falling off. Sometimes they are destined to support dynamic effects, sometimes reduced to the role of simple Acolourists.@ I plead guilty myself in this respect.

With the orchestra of Igor Stravinsky's *Rite of Spring* and in his music for ensembles of wind instruments, the modern orchestra and its instruments became fixed as we know it today.

19 Stravinsky *Chronicle*, p. 221

Band Music Marches into the 20th Century

While Stravinsky has defined the wind ensemble for our century, the wind band, had already, in the 19th century, been the recipient of two important works, the *Grand Symphony for Band* by Berlioz, and the *Trauersinfonie* by Wagner. The first significant work for the wind band written in the 20th century was contributed by the English composer, Gustav Holst (1874-1934). His *First Suite for Band in E-Flat* was written in 1909, the same year in which Stravinsky wrote *The Firebird*. The *First Suite* was composed for the typical English military band of the period, as follows: [20]

Reeds	*Brass*
Flute	4 horns in E flat
Piccolo	solo and 1st B flat cornet
2 E flat clarinets	2nd B flat cornet
2 oboes	2 trumpets in B flat
solo, 1st, 2nd, and 3rd B flat clarinets	3 trombones
alto saxophone	euphonium
tenor saxophone	Tubas
2 bassoons	

Percussion

kettledrums	snare drum
bass drum	cymbal
tambourine	Triangle

[20] Alto and bass clarinet and flugelhorn parts were added by the publisher to accommodate the prevalence of those instruments in American bands, but they are not necessary for performance.

The musical materials for the three movements of this suite (*Chaconne, Intermezzo, March*) are drawn from the fourteen-note *Chaconne* theme with which the work begins. The musical developments are those of a first-class craftsman who understood better, perhaps, than any of his predecessors (and many who came after him) the instrumental ensemble we call a band. This score, written when Holst was thirty-five years old, and listed as Opus 28a, shows a deep knowledge of instrumental part-writing, and an acute awareness of orchestral traditions. Holst's scoring for the military band, however, is conceived in terms of the band medium. Unlike so many of his colleagues, he achieved a new concept of band scoring without being hampered by his consummate knowledge of orchestral principles. Holst was a trombone player in the Scottish Orchestra. Although biographical data does not indicate that he had any experience with military bands, it is difficult to believe he did not, considering his knowledge of the medium and the skillful simplicity with which he managed it. *The First Suite in E-flat* is perhaps more often played in America than any original work of symphonic proportions written for band; for it the band world has never been as grateful as it might be. Holst wrote a *Second Suite for Band in F* two years after the one in E-flat. This work is based upon English country tunes. It was the first of a long line of similar folk song pieces for both band and orchestra to come from the pens of England's composers.

Across the Channel, the French composer Florent Schmitt (1870-1958) produced another composition that plumbed the depths of an extremely large assembly of reeds, brass and percussion, in his *Dionysiaques* for Symphonic Band, Opus 62, in 1914. Designed for the Garde Republican Band of Paris, it is scored for their highly individual instrumentation: 2 piccolos, 3 flutes, 2 oboes, English horn, 2 bassoons, 1 contrabass Sarrusaphone; 2 E-flat clarinets, 2 solo clarinets, 12 1st B-flat clarinets, 12 2nd B-flat clarinets, 2 B-flat bass clarinets, 1 contrabass clarinet in B flat; 2 alto saxophones, 2 tenor saxophones, 2 baritone saxophones, 1 bass saxophone; 2 trumpets in C, 2 cornets, 2 horns 4 trombones; kettledrums, 4 percussion, glockenspiel, xylophone, celesta; 1 small trumpet in E flat; 2 bugles in B flat, 2 bugles in B flat, 3 alto bugles in E flat, 3 baritones in B flat, 6 tubas in B flat, 2 string contrabasses B 48 reeds, 27 brass, 9 percussion, 2 string contrabasses, totaling 86 players, as listed in the 1925 score published by Durand eleven years after its composition.

Almost no composer followed the strong direction to which Schmitt had pointed in this highly challenging and extremely rewarding score. Half a century would pass before *Dionysiaques* was given creative company.

The next important music for the military band was contributed by another English composer, Ralph Vaughan Williams (1872-1958). When he wrote the *Folk Song Suite* and *Toccata Marziale* in 1924, he was already renown for his *London* and *Pastorale* Symphonies. An avid interest in the folk songs of his native England and in Tudor church music are strongly evident in his creative activity. His first work for band was the *Folk Song Suite* of three movements in which he set traditional melodies with remarkable originality and subtle charm. His second work for band, the *Toccata Marziale*, is one of the most significant pieces of music which has been contributed to the literature. This is an original work, the musical materials of which are entirely the composer's own. The *Toccata Marziale* is a first-rate work by any standard. It, like Holst's *Suite in E-flat*, was conceived for the medium, its contrapuntal textures having been calculated and expressed by the juxtaposition of massed effects in large sections of reeds and brasses. It is difficult to imagine this work being performed by any ensemble but a large wind band. Harmonically it is typical of the Vaughan Williams style in the year of its composition (1924), with its diatonic movement of parallel major and minor

triads, and free manipulation of major, minor and whole-tone scales. A great rhythmic vigor, synonymous with its title, permeates the whole score, propelling strong contrapuntal lines throughout its complicated but vividly clear harmonic textures. The fundamental properties of the band's sonority, its instrumental virtuosity and color, with strong emphasis upon the fine gradations between long and short, forte and piano, are all most brilliantly revealed in its superb scoring.

These three works for military band were written for bands of the British Army. These outstanding military bands, the development of which may date from the occupation of England by the Roman legions, have been the prototype for the development of the present day concert band so closely identified with American colleges and universities. We may have taken the basis of the tables of organization for our army from the Prussians and the French, but our bands follow the British example. The complexities of the reed instrumentation of French military bands, apparent in Schmitt's great *Dionysiaques* were unappealing, and the complicated instrumentation of the Prussian brasses was even less attractive. Midway between these two instrumentations stood the constitution of the English bands of the Royal Artillery, Coldstream Guards, and the Band of the Royal Military School of Music at Kneller Hall. Furthermore, there existed a large and varied catalog of music written or arranged for the many bands of the British Army stationed throughout the British Empire. The British music publishing houses issued frequent, attractive catalogs of music for brass band and military band that included a wide assortment of works: numerous arrangements of the popular music of the day, to be used both for concerts and dancing; the most attractive solos for cornet; the sure-fire novelties, marches, descriptive pieces and operatic potpourris; and some of the finest adaptations of the best orchestral music from all countries and composers. The publishers and their catalogs were strong forces for the inert Aadoption@ of the British Army Band instrumentation as the basis for the American concert and military band.

The Professional Concert Band in America

The first American bands, like many of our public and private institutions, were modeled after their European predecessors. The United States Marine Band, founded in 1798, began with an instrumentation that closely resembled that of the bands of Frederick the Great of Prussia. Not only was it our first organized band; it has functioned without interruption since its founding, and has always been a force in the development of the American concert band.

The first bandmaster to capture America=s imagination was the Irish-born American, Patrick Sarsfield Gilmore (1829-1892). Gilmore was an excellent performer on the cornet, a conductor with a tremendous power of communication, a showman of considerable talent for discerning and responding to the public's taste, and an impresario in the grand manner. One of the most influential musical directors in the history of music in America, he was conductor of several bands under his own name and those of the military units with which he was associated from time to time.

The band which he led for the 22nd Regiment of New York had an instrumentation which was remarkably complete and well balanced. Its 35 reeds, 27 brass, and 4 percussion, an instrumentation so often desired by contemporary bandmasters, was distributed as follows:

GILMORE'S BAND FOR THE 22nd REGIMENT OF NEW YORK (1878)[21]

66 players

Brass	*Reeds*
1 soprano cornet in E flat	2 piccolos
2 alto horns in E flat	16 clarinets in B flat (divided in 3's)
4 cornets in B flat	2 flutes
2 tenor horns in B flat	1 alto clarinet
2 trumpets in B flat	2 oboes
2 euphoniums	1 bass clarinet
2 flugelhorns	2 bassoons
3 trombones	1 soprano saxophone
4 horns	1 contrabassoon
5 basses	1 alto saxophone
	2 soprano clarinets in A flat
	1 tenor saxophone
Percussion , 4 players	3 soprano clarinets in E-flat
	l baritone saxophone

The acclaim with which Gilmore and this band were received by the critics and the public when they toured Europe in 1878, as well as the popularity that they enjoyed at home, established this band as the best America had produced. The work that Patrick Gilmore had begun with such success was continued and furthered by John Philip Sousa (1854-1932).

Appointed in 1880 as leader of the U. S. Marine Band, Sousa resigned that post to form his own band in 1892. His subsequent travels to Europe and around the world, during which he composed and played his famous marches, established him as the greatest musical attraction that the United States had yet produced. (It is said of him that he was the only conductor who ever made a million dollars playing one-night stands.)

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21 This instrumentation is from the listings in the excellent study by Ernest Elwyn Lyon, Athe Instrumentation of the Symphony Band@ (Eastman School of Music of the University of Rochester Dissertation, 1938) p. 23

He is still the god of the American concert band world. His era of personal influence in the high school and college band movement has extended far beyond his death. His interest in the college band movement and his particular respect for Albert Austin Harding (1880-1958), who founded the influential Department of Bands at the University of Illinois, resulted in Sousa's decision to give much of his extensive library of printed and manuscript music for band to that distinguished institution. The traditions which have surrounded all aspects of Sousa as a great bandmaster were carefully preserved by Harding, his associates, his many devoted students, and his successor, Mark H. Hindsley (born September 6, 1889).

Sousa's band varied in size and instrumentation according to the nature of its varied engagements. The instrumentation which he listed in his autobiography, *Marching Along*,[22] gives his concept of what the typical band should be:

Brass	*Reeds*
6 cornets	6 flutes (piccolo)
2 trumpets	2 oboes
4 French horns	1 English horn
4 trombones	2 bassoons
2 euphoniums	26 B flat clarinets
6 sousaphones	1 alto clarinet
	2 bass clarinets
Percussion	4 alto saxophones
3 players	2 tenor saxophones
	1 baritone saxophone

[22] John Philip Sousa, *Marching Along* (Boston, 1928), p. 277, Hale, Cushman and Flint.

A comparison of this instrumentation with that of Gilmore's band of 1878 reveals an obvious desire to "refine" the sound of the band and to simplify the diversity of its instrumentation. Notably absent from Mr. Sousa's instrumentation are the E-flat clarinets (for which the additional flutes are supposed to be adequate compensation), the soprano saxophone, contra-bassoon, E-flat soprano cornet, flugelhorns, and the tenor horns. (While his sousaphone may have redistributed the weight of the tuba to the advantage of the player on the march, this accommodation was hardly a fit compensation for the loss of tonal quality which often came from the forward-shooting bell of the Helicon tuba which he knew from his days with the Marine Band. The sousaphone he used in his band had its unusually large flaring bell pointing straight upward, not forward, as is the fashion today.) Bandmasters, arrangers, and composers who lament the absence of any or all of these instruments from general use today can almost certainly trace their passing to the influence of Sousa.

But it is not in the realm of instrumentation that Sousa's value to the development of the American wind bands is to be measured. Sousa's great contribution was his genius for writing music for the feet instead of for the head. His incomparable military marches, written with a deceptive simplicity of means and an appeal to fundamental human emotions, have become classics. He also performed skillful and sympathetic transcriptions of outstanding orchestral music, excerpted in band arrangements. Sousa may not have been the first to program such music, but his choosing to do so strongly influenced those who followed him. Albert Austin Harding, in particular, through his life-long devotion to the art of transcription, encouraged the dominance of that repertory in the programs of America's concert bands.

Sousa's magnificent personal success, together with the imperishable repertory of marches he composed, were his most important contributions to the development of the band in America. In his popular success he spread the gospel of the band as a public entertainment medium *par excellence* to every portion of the land.

The bands of Gilmore and Sousa preceded in popularity other forms of musical performance. For instance, at the time that Gilmore was at the height of his career in the 1880s, America had exactly four major symphony orchestras, two in New York and one each in St. Louis and Boston. America's amusement parks and beaches, however, numbered in the hundreds. The famous bands all found a ready audience at places like Asbury Park, Willow Grove, Euclid Beach, Manhattan Beach, Highland Park, and countless other famous resort areas.

In almost every instance these amusement areas were either owned by or greatly dependent upon public and private transportation companies, which, whether operating on road, rail or canal, dragged or hauled the passengers in cars, and were therefore called *traction* companies. Where the amusement parks were wholly owned by traction companies, there resulted a virtual monopoly: steamers brought the public to the gates for a stated tariff; the family then paid a general admission to the park, and for further entertainment offered by the standard diversions of such places, still other revenues were collected. A special admission may or may not have been charged to those who wished to hear the daily band concerts, but as a rule this part of a park's attractions was included in the general admission fee.[23]

[23] Perhaps today's closest equivalent is Disneyland or Walt Disney World, where a daily fee entitles the purchaser to most of the entertainment within, including a daily parade and frequent band concerts.

It was often necessary for men like Sousa to perform at these parks with what would be considered by an American college band director as a very small band indeed. Of course, unlike the college bandleader, Mr. Sousa had to pay his musicians out of the contract let to him by the park owner.

When the automobile replaced the train, and radio broadcasts became widely available, the professional concert band began to disappear as an important medium of public music making. Then the advent of the American jazz band sounded the death knell for the professional concert band, which had often furnished music for dancing as an important part of its professional engagement. When the polka, schottische, waltz and two-step were displaced by the fox-trot, Charleston, shag, rag, and black-bottom, America had a new instrumental ensemble to dance to. With the bankruptcy of the traction companies and the disappearance of the amusement parks, the professional concert band all but completely vanished from the American musical scene.

How the University Rescued the Concert Band

While the professional band had thrived, our military bands had not. The condition of our Army band structure was pitiful indeed, as was starkly revealed when the United States entered World War I in 1917. Out of the frantic attempt to equip bands that developed in the succeeding months, the American band-instrument manufacturers greatly expanded. Shortly after the Armistice of 1918, the schools of America were beginning to show an avid interest in a comparatively new game called football. Instrument manufacturers, with their newly expanded capacity, encouraged the embryonic market of high school and college bands, and sponsored competitive high school band contests, which became to the educational band movement what the amusement park had been to the professional concert band.

Long before the heyday of the high school and college bands, our first public education in music had begun in the city of Boston in 1832, when Lowell Mason (1792-1872) introduced the rudiments of note reading and singing into the public schools.

Although musical culture and music education were highly developed in Europe by the time the colonists began to arrive in America, little music was to be found in the new colonies. Perhaps this situation resulted from the basic need for survival, combined with the disapproval of secular music on the part of the Puritan churches, and the rural quality of much of early colonial life. In urban areas, such musical activity as existed must have been of a very limited nature, since many who either fled or emigrated from England and Europe to America intentionally left behind the church and the court , the two most influential institutions in the long development of the art of music in general and the history of the use of wind instruments in particular.

There were exceptions. In Bethlehem, Pennsylvania, Moravian settlers had imported the musical life of the Germany from which they had come, complete with organ, orchestra, trombone choir, and Collegium Musicum, all of which was in place before 1750. By 1819 a Beethoven Society existed in Portland, Maine, the Handel and Haydn Society of Boston was founded in 1815, and the New York Philharmonic Society became the first permanent orchestra in the United States in 1842. Westward expansion and the companion development of railroad lines opened up a vast new territory for that ever-present American institution, the traveling European virtuoso. One such, Theodore Thomas (1835-1905) came to America from his native Germany at the age of ten. He became one of the most remarkable figures in the history of American musical performance. After an early career as a violin soloist, he organized his own orchestra.

To attract the best players, he knew he must keep them both busy and well paid. So he launched a series of tours that took his orchestra to almost every principal community in America, bringing to the people a first class orchestra playing only the finest orchestral literature. Several present-day orchestras were subsequently organized in cities where Thomas and his players had first visited.

Henry Lee Higginson, the Boston banker, founded the Boston Symphony in 1882 to provide his native city with an orchestra comparable to the one he so admired in Vienna (after the Boston concerts of the Thomas orchestra helped to convince him that what had been done in Vienna could be emulated in Boston).[24] Nine years later, in 1891, after he had served for fourteen years as conductor of the New York Philharmonic Society, Theodore Thomas settled in Chicago as the founder and conductor of the Chicago Symphony Orchestra, a post in which he continued until his death.[25]

But for every man like Thomas (and later Leopold Damrosch) who came, stayed and gave of himself to the enrichment of American musical life, there were hundreds of musical journeymen who, as virtuosos, only came, took, ridiculed, and left with bulging purses.

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[24] M. A. DeWolfe Howe, *The Boston Symphony Orchestra 1881-1931*, rev. and ext. John N. Burke (Boston, 1931) Houghton Mifflin Company.

[25] Charles Edward Russell, *The American Orchestra and Theodore Thomas* (Garden City, 1927) Doubleday, Page and Company.

The symphony orchestras that Thomas and Damrosch founded were modeled after their well-known European counterparts. These orchestras conformed to their European models in order to present the great orchestral repertory they were organized to perform for America. The American concert bands of Gilmore and Sousa, on the other hand, represented perhaps more careful evaluations of the musical needs and desires of the general American public than did the orchestras of New York, Chicago, Boston or St. Louis.

Gilmore and Sousa struck out for themselves to entertain a ready and waiting audience. (Sousa, indeed, began his career as a violinist, but elected to develop the band instead of the orchestra.) Their patrons needed nothing more than the desire to attend, be entertained, and the price of admission. The band seemed destined to serve the popular needs of the people while the orchestra was to maintain the traditions of more sophisticated music-making and listening.

Shortly before World War I, a few orchestras and bands of meager instrumentation began to make their appearance in the public schools of America. At this time, we had no instrumental music in the curricula of the public schools, and pitifully few teacher-training institutions. Many of these public-school ensembles were therefore personally developed by devoted teachers and sometime performers, of whom Will Earhart, whose work in Richmond, Indiana, is generally considered to be the first significant instrumental activity in the public schools of America, was typical. Players rehearsed after school hours, in return for half a credit per semester toward graduation. In return for the services of the orchestra at various school functions, the Board of Education furnished Earhart and his orchestra with music and other necessary materials. From a group of modest instrumentation in 1905, he developed a full orchestra of symphonic proportions seven years later. Furthermore, he had begun another orchestra of beginning students to maintain a steady flow of players to the constantly changing personnel that is so much a part of educational instrumental music.[26]

[26] Earhart described his work in a 1905 article which was reprinted by Edward Birge in his *History of Public School Music in the United States.(* Boston, 1928), pp. 177-178. The Oliver Ditson Company.

After the United States entered World War I, the preoccupation of the American people with the martial spirit, the public display of hastily organized military bands, the patriotic fervor of Liberty Bond drives and the inauguration of a short-lived period of military training in the public schools all contributed to the coming development of the high school and college band. The army draft and the training of band leaders at government expense provided a whole new corps of teachers and performers devoted to the cause of the band.

Meanwhile, Earhart's work was emulated elsewhere. In Rochester, New York, Joseph E. Maddy (1891-1966) was made the "first supervisor of Instrumental Music in America"[27] At 27, Maddy helped to enlist the financial backing of Rochester's most famous industrialist, George Eastman, who provided the public schools of Rochester with $10,000 worth of instruments.

That same year, Mr. Eastman first revealed his desire to establish a school of music for the University of Rochester, which, bearing his name, opened three years later. Inseparable from its place in the phenomenal growth of musical activity in the United States in the years during which The Eastman School of Music[28] was founded is the work of its second director, Howard Hanson (1896-1981). His boundless gifts were more than a match for George Eastman's vision and generosity. From the outset of his administration, Hanson's unswerving purpose was to develop a " . . .school of music of real university stature, devoted to the objective of making its students aware of the whole of music and of the humanities of which music is one part."[29]

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27 Gerald R. Prescott and Lawrence W. Chidester, *Getting Results with School Bands* (New York and Minneapolis, 1938) pp. 5-6. Quoted by permission of the publisher Carl Fischer, Inc., and Paul A. Schmidt Music Co.

28 The School of Music of the University of Rochester

29 Charles Riker, *The Eastman School of Music: It=s First Quarter Century, 1921-1946* (Rochester, 1948), p. 22. The University of Rochester.

Instrumental music programs in the public schools remained hampered by their extra-curricular status until 1920, when Charles McCray of Parsons, Kansas, ". . . obtained permission from his superintendent for school-time rehearsals and credit. Mr. McCray's orchestra demonstrated the value of such innovations at the Music Supervisors National Conference the next year. Many of the instrumental teachers at that meeting went home with the determination to obtain similar concessions."[30]

Of the two instrumental mediums, the orchestra had been the first to develop in the schools. The band, however, caught up rapidly with the advent of free class instruction during school hours. The band-instrument manufacturing business, which had mushroomed into an industry thanks to World War I, was quick to seize upon the commercial possibilities of a vast school band program. Together with the music publishers, who already knew something of its commercial value, they began a program of long term assistance to music educators.

30 Prescott and Chidester, op. cit., p. 6.

Contests in the public schools began in Chicago in 1923, when a group of band instrument manufacturers organized a contest to stimulate the sale of instruments. The manufacturers provided funds, but invited the teachers to run the contest, to neutralize objections to the commercial aspects of the scheme. Two important organizations emerged to guide the contests' future development: The Music Supervisors National Conference and the National Bureau for the Advancement of Music. The latter administrated contest activity, while the former's Committee on Instrumental Affairs was responsible for promotion within the schools. They accepted no money from the instrument industry. After state contests were held between 1924 and 1926, "the first National School Band contest under the new sponsorship was held in Fostoria, Ohio, in 1926. In order to obtain reduced fares on railroads some formal organization was necessary, and thus the National School Band Association came into being."[31] In 1928, it became the organization for solo and ensemble contests.

Soon afterwards, the advent of "talking pictures" put an end both to vaudeville and to the need for orchestras in movie theatres, ultimately throwing thousands of musicians and their conductors out of work. This condition, coupled with the economic depression of 1929-1932, drove hundreds of men from the theater pit into the teacher's college. The period of recovery from the Depression to the outbreak of World War II was, therefore, all the more rich in the development of teacher training.

The school band contests, while vital to the growth of school music, were not all virtue, for they tended to develop the spirit of sheer competition more than they did the spirit of music making. Nevertheless, the contests did awaken communities to the cause of public music education and the necessity for its unquestioned support. They served to standardize the instrumentation of school bands, to cause the publication of a great deal of worthwhile musical literature for bands and orchestras, to elevate teachers' salaries, and even to raise the standard of quality in the instrument manufacturing industry.

High school orchestras quickly joined the contest movement, holding their first National Contest at Iowa City, Iowa, in 1929. The ensuing years saw the growth of many outstanding school orchestras of symphonic proportions. The establishment and expansion of public class instruction on wind instruments, coupled with the string activity of private teachers, resulted in an era of fine school orchestras which, unfortunately, declined after the beginning of World War II.

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31 Prescott and Chidester, op. cit. p. 9.

Rochester's Joseph E. Maddy organized the first National High School Orchestra for the 1926 Music Supervisors National Conference in Detroit, and a second one, a year later, for the Department of Superintendence of the National Education Association in Dallas. The following year he organized a third National High School Orchestra, this time in Chicago. These three gatherings generated enthusiasm among players and outside support for a permanent institution. With the assistance of innumerable well-known conductors, educators, philanthropists, and educational foundations, Joseph Maddy and his inseparable partner, Thaddeus P. Giddings, using also their private fortunes, indefatigable energy and devotion, established the National High School Orchestra and Band Camp in the pine woods at Interlochen, Michigan. Now known as Interlochen Center for the Arts, it is one of America's most exceptional music-education achievements. Many of the thousands of students who had their first memorable musical experiences on the stage of Interlochen Bowl have since become associated with America's important musical institutions; but a source of equal pride to its founders are the countless campers who, though following other vocations, have taken their places in the important amateur music making of their respective communities.

Another vital force in the rapid expansion of high school instrumental music was the advent of the marching band, which, like football, was borrowed by the high schools from America's colleges. A. A. Harding, who assumed the directorship of the University of Illinois Band in 1905, recalled that "When we first began to form letters and words, ... we had never seen or heard of a college band which formed words while marching and playing. It has always been the policy of the Illinois Band to avoid copying any feature from any other band."[32] However, there were countless imitators of Harding's Football Band, who borrowed heavily from the techniques, always emphasizing the musical and military aspects of a marching band, evolved by Harding and his assistants.

The public appearances of school and college marching bands, in which they reach spectacular heights of pageantry, precision, and musical presentation, are the services by which the general public best knows and judges the value of institutional music. It is not surprising, therefore, that the first requirement for the training of a college or high school band director is his proficiency in the art of the marching band. His further growth as a teacher and a musician will be tolerated only so long as he continues to provide the public and the school administration with a satisfactory marching band.

Even so, the educational concert band at the college level has also become a force to which the musical world must offer increasing regard. America has innumerable first-class concert-giving bands in its educational institutions.

The reaction of the significant composer to the development of the concert band in America has been cautious indeed. Those few who have not ignored it altogether have contributed to it music which is not always their best. It is a popular pastime for the band director, both individually and in conference with his colleagues, to deplore the lack of first-rate literature for band by the world's first-rate composers. But there has been a notable increase in the last few decades in the number of composers, both here and abroad, who have displayed a serious interest in the concert band medium.

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32 Cary Clive Burford, "Band Formations and Pageantry at Football Games," "*We're Loyal to You, Illinois"* (Danville, 1952), p. 373. Quoted by permission of the publisher, Interstate Printers.

Much of the twentieth century's music for band, such as Hindemith's *Symphony in B-flat*, Schoenberg's *Variations, Opus 43a*, Milhaud's *Suite Française*, Persichetti's *Divertimento* and *Sixth Symphony*, and Schuman's *George Washington Bridge*, is written in harmonic styles which require the study of contemporary musical idioms. This is a vital challenge to today's conductors, who must have total control of the increasing demands of the music of their own time. The future course of an organized musical literature for the concert band, however, remains where it has always been, *in the hands of the composer*.